

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INT	ERNATIO	NAL	BURFA	U
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To:

Commissioner
US Department of Commerce
United States Patent and Trademark
Office, PCT
2011 South Clark Place Room
CP2/5C24
Arlington, VA 22202
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year)
30 May 2001 (30.05.01)

International application No. PCT/NO00/00326

International filing date (day/month/year) 04 October 2000 (04.10.00)

Applicant

JENSSEN, Inge, Henning

Applicant's or agent's file reference

PS4300 IN

Priority date (day/month/year)

04 October 1999 (04.10.99)

1.	The designated Office is hereby notified of its election made:
	X in the demand filed with the International Preliminary Examining Authority on:
	23 April 2001 (23.04.01)
	in a notice effecting later election filed with the International Bureau on:
2.	The election X was
	was not
	made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland

Authorized officer

Nestor Santesso

Facsimile No.: (41-22) 740.14.35

Telephone No.: (41-22) 338.83.38

BEST AVAILABLE COPY

			From the INTERNATIONAL BUREAU				
PC	T		То:		_		
NOTIFICATION OF THE RECORDING OF A CHANGE (PCT Rule 92bis.1 and Administrative Instructions, Section 422) Date of mailing (day/month/year) 12 December 2001 (12.12.01)		OSLO PATENTKONTOR AS P.O. Box 7007 M N-0306 Oslo NORVÈGE					
Applicant's or agent's file referer PS4300 IN	nce			IMPORTANT NOTIFICATION			
International application No. PCT/NO00/00326					n g date (da er 2000 ((y/month/ye 04.10.00)	ar)
The following indications app X the applicant	eared on record o	_	the ager	nt		the commo	n representative
Name and Address	_			i	of Nationa	ality	State of Residence
JENSSEN, Inge, Hennin Hansjordnes gate 8 N-9009 Tromsø Norway	g		·	NO NO Telephone No.			
				Facsimile No.			
				Telep	orinter No.		
2. The International Bureau here the person	eby notifies the ap	plicant that the	г	\neg	e has been ne nationali		oncerning:
Name and Address			L		of Nationa		State of Residence
JENSSEN, Inge, Hennin	ıg				NO	,,	NO
Kveldrovégen 9 N-9007 Tromsø Norway			Telephone No.			· · · · · · · · · · · · · · · · · · ·	
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3. Further observations, if neces	sary:			L			
4. A copy of this notification has	been sent to:						
X the receiving Office				th	e designat	ed Offices o	oncerned
the International Searching Authority		[X th	e elected (Offices conc	erned	
the International Prelimin	ary Examining Au	uthority		ot	ther:		
The International Boats 34, chemin des	Colombettes		Authorized	officer		e KARKA	CHI
1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35		Telephone No.: (41-22) 338 83 38					

Form PCT/IB/306 (March 1994)

004531589

PATENT COOPERATION TREATY



REC'D 25	JUL 2001
WIPO	Pon

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PS4300 IN	FOR FURTHER ACTI		- cation of Transmittal of International y Examination Report (Form PCT/IPEA/416)		
International application No.	International filing date (d	lay/month/year)	Priority date (day/month/year)		
PCT/NO00/00326	04.10.2000		04.10.1999		
International Patent Classification (IPC) of	r national classification and	IPC ₇			
A01K 63/02					
1					
Applicant Tanana Managina and Tanana Anda Managina and Tanana Managina and Tanana Anda Managina and Tanana Anda Managina Anda Managina and Tanana Anda Managina Anda Managina Anda Managina Anda Managina Anda Managina Anda Manag					
Jenssen, Inge Henning					
1. This international preliminary examples Authority and is transmitted to the consists of a total or this report is also accompanies an amended and are the boundary (see Rule 70.16 and Section).	e applicant according to Art f _3 sheets, i nied by ANNEXES, i.e., sh asis for this report and/or sh	icle 36. Including this cover leets of the description leets containing rec	sheet. on, claims and/or drawings which have tifications made before this Authority		
These annexes consist of a total of					
3. This report contains indications rel	ating to the following items	3:			
I 🔀 Basis of the report					
II Priority			·		
III Non-establishment of	opinion with regard to nove	elty, inventive step	and industrial applicability		
IV Lack of unity of inver	ntion				
V Reasoned statement u citations and explanat	nder Article 35(2) with rega ions supporting such statem	ard to novelty, inver ent	ntive step or industrial applicability;		
VI Certain documents cit	ed				
VII Certain defects in the	international application				
VIII Certain observations of	on the international applicat	ion			
L.	••				
Date of submission of the demand	D	ate of completion o	of this report		
23.04.2001	2	1.06.2001			
Name and mailing address of the IPEA/SE	A	uthorized officer			
Patent- och registreringsverket Box 5055	Telex 17978				
S-102 42 STOCKHOLM	PATOREG-S G	öran Carls			
acsimile No. 08-667 72 88 Telephone No. 08-782 25 00					



INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/NO00/00326

I.	Bas	asis of the report	
1.	With	th regard to the elements of the international application:*	
	\boxtimes	the international application as originally filed	
		the description:	
		pages, as originally	filed
		pages, filed with the de	mand
		pages, filed with the letter of	
		the claims:	
		pages, as originally	filed
		pages, as amended (together with any statement) under arti	cle 19
		pages, filed with the de	mand
		pages, filed with the letter of	
		the drawings:	
		pages, as originally	filed
		pages, filed with the de	mand
		pages, filed with the letter of	
		the sequence listing part of the description:	
		pages, as originally	filed
		pages, filed with the de	mand
		pages, filed with the letter of	
3.	These	international application was filed, unless otherwise indicated under this item. see elements were available or furnished to this Authority in the following languageEnglish which the language of a translation furnished for the purposes of international search (under Rule 23.1(b)). The language of publication of the international application (under Rule 48.3(b)). The language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 at or 55.3). The regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international iminary examination was carried out on the basis of the sequence listing: contained in the international application in written form. filled together with the international application in computer readable form. furnished subsequently to this Authority in written form. The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished. The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.	ch is: und/
	Repla in this	The amendments have resulted in the cancellation of: the description, pages the claims, Nos. the drawings, sheet/fig This report has been established as if (some of) the amendments had not been made, since they have been considered to beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2 (c)).** clacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referently report as "originally filed" and are annexed to this report since they do not contain amendments (Rules 70.16	-
		replacement sheet containing such amendments must be referred to under item I and annexed to this report.	

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/NO00/00326

V.	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

l.	Statement			
	Novelty (N)	Claims	1-5	YES
		Claims	-	NO NO
	Inventive step (IS)	Claims	1-5	YES
		Claims		NO NO
	Industrial applicability (IA)	Claims	1-5	YES
		Claims		NO NO

2. Citations and explanations (Rule 70.7)

The claimed invention is not considered to be anticipated by the patent document cited. This document does not reveal the device for storing and transporting live fish described in the claims.

The invention according to claims 1-5 is therefore considered to be novel, to involve an inventive step and to be industrially applicable.

GB 730652 A (ERNST KARL ROSCHER)

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 12 April 2001 (12.04.2001)

PCT

(10) International Publication Number WO 01/24623 A1

- (51) International Patent Classification⁷: A01K 63/02
- (21) International Application Number: PCT/NO00/00326
- (22) International Filing Date: 4 October 2000 (04.10.2000)
- (25) Filing Language:

Norwegian

(26) Publication Language:

English

(30) Priority Data: 19994839

4 October 1999 (04.10.1999) N

- (71) Applicant and
- (72) Inventor: JENSSEN, Inge, Henning [NO/NO]; Hansjordnes gate 8, N-9009 Tromsø (NO).
- (74) Agent: OSLO PATENTKONTOR AS; P.O. Box 7007 M, N-0306 Oslo (NO).

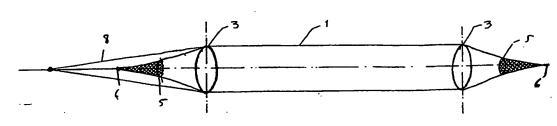
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

With international search report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: EQUIPMENT FOR STORAGE AND TRANSPORT OF LIVING FISH



(57) Abstract: A fish bag (1, 1') comprising a netting with bag rings (3) and at the end a second netting (4) with purse lines (5, 6) and a towing line (9). One or more braces (9) and locking rings (8) to connect several fish bags (1) into larger units.



INTERNATIONAL SEARCH REPORT

International application No.

PCT/NO 00/00326

A. CLASSIFICATION OF SUBJECT MATTER					
IPC7: A01K 63/02 According to International Patent Classification (IPC) or to both national classification and IPC					
B. FIELDS SEARCHED					
Minimum documentation searched (classification system followed by	y classification symbols)				
IPC7: A01K		- N- 5-11			
SE,DK,FI,NO classes as above	e extent that such documents are included in	n the fields searched			
Electronic data base consulted during the international search (name	and data base and where practicable search	terms used)			
biccionic data case consulted during the international search (main	e of data base and, where practicable, scarci	r terms useuy			
C. DOCUMENTS CONSIDERED TO BE RELEVANT					
Category* Citation of document, with indication, where ap	propriate, of the relevant passages	Relevant to claim No.			
A GB 730652 A (ERNST KARL ROSCHER) (25.05.55), page 2, column), 25 May 1955 54 - line 80, figure 1	1,3,5			
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·					
Further documents are listed in the continuation of Bo	x C. X See patent family annex				
Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the inte date and not in conflict with the appli- the principle or theory underlying the	cation but cited to understand			
"E" earlier application or patent but published on or after the international filing date		claimed invention cannot be			
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	step when the document is taken alone "Y" document of particular relevance: the	;			
"O" document referring to an oral disclosure, use, exhibition or other means	considered to involve an inventive ster combined with one or more other such	when the document is documents, such combination			
"P" document published prior to the international filing date but later than the priority date claimed	"P" document published prior to the international filing date but later than				
Date of the actual completion of the international search	Date of mailing of the international s	earch report			
9 January 2001	1 7 -01- 2001				
9 January 2001 Name and mailing address of the ISA: Authorized officer					
Swedish Patent Office					
Box 5055, S-102 42 STOCKHOLM Facsimile No. + 46 8 666 02 86	Caroline Stolt/js	Ì			

INTERNATIONAL SEARCH REPORT Information on patent family members

04/12/00

International application No.
PCT/NO 00/00326

Patent document cited in search report			Publication date	Patent family member(s)	Publication date
GB	730652	Α	25/05/55	NONE	

Form PCT/ISA/210 (patent family annex) (July 1998)

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WO 01/24623

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PCT/NO00/00326

Equipment for storage and transport of living fish.

The present invention concerns primarily a device for storage and transport of living fish, where the device is sausage-formed and the transport is preferably performed by this being towed after a boat.

The harvesting of the sea in the form of fishing is the largest and oldest business in this country through history. Today the fish export, disregarding the petrol area, is Norway's largest business money-wise, and the assurance of deliveries of products of high quality is of decisive importance for it to remain a large industry also in the future.

There are dumped large quantities of fish because the capacity of transporting it ashore is not present, and it is also not of the proper quality.

There are several factors interacting to determine the quality of the fish and the fish products when they arrive at the consumers somewhere in the world. When the fish die, a process starts in the fish meat giving it a poorer quality. The quality of the fish meat arriving at the consumer may be improved by waiting for the longest possible time before killing the fish so that the degradation process has been going on for as short a time as possible. The further treatment of the fish in the form of processing, refining, storage and transport should be made as short as possible under the most suitable conditions to maintain the quality.

The delaying of the time for the sacrificing of the fish and thus the starting of the decaying process, is a method that has been used in many connections also in former times through history. In seasons with e.g. a good supply of sails and perhaps a lack of capacity in the receiving country, the containment of fish in enclosures has been

common. This is done by the fish caught alive being imprisoned in a netting bag being anchored until it is fetched and is hoisted into a supply ship or the netting bag is towed to a receiving plant for fish. Fish that are imprisoned in such an enclosure will be standing very cramped under perhaps poor current conditions, and this stresses the fish, something that again reduces the quality and the fish die.

There are used well supply ships for transporting the fish
from the netting enclosures. The well supply ships are
equipped with tanks into which there is pumped seawater and
wherein fish are kept during their transport and reception.
Well supply ships is an expensive solution when considering
that in many instances a lot of fish die in the netting
enclosures before the ships collect them, so the economical
result of the fish may not be worthwhile in many cases.

In Norwegian patent no. 20.850 there is disclosed a storage unit for live fish comprising floats in both ends and between these a netting-cage for storing fish. Such a solution is suitable for storing fish, is more expensive than required, and does not represent any good solution with respect to transport. The transport of fish in any such device will have its limitation in how fast it may be transported for the fish to survive, and this is not any economically suitable speed for the transport per se.

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Norwegian patent no. 81.500 discloses a container for collecting fish from a trawl and for further transport of the collected live fish to a receiving plant and for shorter storage. The collector is tied to a trawling bag and is not regarded as any suitable way to store and transport fish with respect to maintaining quality and avoid fish death.

In addition to the transporting of fish in a more or less hydrodynamic device, fish are transported in netting bags, a keeping netting. The towed keeping netting may not exceed a speed of 2-3 knots, something that is very time-consuming. Such solutions are disclosed in Norwegian patents nos. 24.069 and 52.761. The former discloses a seine bag being kept extended by a floating body, and a boat pulls the entire device. A speed exceeding 2-3 knots will be stressing for the fish and will create conditions increasing the mortality. In no. 52.761 there is disclosed a somewhat similar device, but here it is emphasised that there exist devices in addition to the seine netting which keep this inflated to avoid it being crushed during transport.

A container for transporting live fish, which also includes a penetrating current of water, appears from Norwegian patent no. 105.955. A penetrating current which may be reduced by one end partly comprising a solid grating or by one end being funnel-shaped. This to reduce the towing resistance and prevent the death of fish.

The purpose of the present invention is to provide a device

being suited for storage and transport of live fish for
transport velocities far exceeding (10-20 knots) what the
fish would endure outside the device, but without it
disparaging the environment. The invention has as one of
its goals a price so that is will be competitive in view of

what exist of transport devices for live fish.

This is achieved by a fish netting being secured in both ends with netting rings, and where at least one end is equipped with one netting and a funnel with a pursing mechanism.

Further details of the invention will be apparent from the disclosure infra of an exemplary embodiment thereof under reference to the figures.

Figure 1 depicts a basic form of the invention.

Figure 2 depicts a connection between several units into larger bags.

Figure 3 depicts connective devices for several units into larger bags.

Figure 4 depicts a detailed view of the outer enclosure according to the invention.

Figure 5 depicts the invention equipped with a brace and an anchoring of the bag.

Figure 6 depicts the fish bag during the transport with an additional external netting.

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The invention comprises a fish bag 1 being made of strong webbing. If extra strength is wanted during e.g. transport, it is possible to sheath the entire fish bag 1 in a first netting 2. See figure 6. The fish bag 1 is tubular and is equipped with a bag ring 3 at both ends somewhat inside the end to keep the tube extended. To the ends of the fish bag 1 there is located a tubular second netting 4. At the transition between the fish bag 1 and the second netting 4, there is located a first purse line 5. A second purse line 6 is located in the second end of the second netting 4. Through these purse lines 5,6 the fish bag 1 may be pursed and be closed at the end so that fish do not escape, but it will be possible to determine and regulate the through-flow of water in the fish bag 1. This is depicted in the figures 1 and 4.

Several fish bags 1 may be connected into larger units as indicated in figure 2. The connection is performed by the bag rings 3 from fish bags 1 being placed adjacent to one another and being interconnected through a locking ring 7. See figure 3. In the connection there will thus be present such funnel-shaped units, one from each fish bag 1. When the fish bag 1,1' is to be towed behind a boat, extra towing lines 8 between the boat and the bag ring 3 may be applied.

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During transport of fish in the fish bag 1,1' the first purse line 5 is closed and the second purse line 6 is completely closed so that flow-through of water is made suitably rapid and comfortable for the fish. 1 may be transported at great speed to its destination without the fish becoming injured or dead.

By employing the present invention fish may be towed ashore and may be stored live until the reception obtains the required capacity or until the market offers the required price. Furthermore, the fish may be towed alive as close as possible to the relevant market prior to it being slaughtered.

According to reports from the Ministry of Fishery a larger number of receptacles for fish along the coast will be 15 closed within a short time. This means a longer transport for delivery of fish and a larger need for transport of the fish alive for maintaining its quality.

When maintaining the fish bag 1,1' in the sea for live storage of the fish, there may along the fish bag 1,1' be located braces 9 in the form of e.g. pipes. See figure 5. 20 These may also function as a scaffolding for persons caring The fish bag 1 may be equipped with current for the fish. providers in the form of motorised propellers to obtain the required through-flow of water when the fish bag 1 is stationary, e.g. in the capacity of a fish farming plant. 25

Claims

- 1. Device for storing and transporting live fish, c h a r a c t e r i z e d i n a fish bag (1) being equipped at both ends with bag rings (3), and at said ends there being arranged a second netting (4) with purse lines (5,6)
 - 2. Device for storing and transporting live fish according to claim 1,
- characterized in that several fish bags (1) are coupled together through locking rings (7).
 - 3. Device for storing and transporting live fish according to any of the preceding claims, c h a r a c t e r i z e d i n that at one end of the fish bag (1,1') there are located towing lines (8).
- 4. Device for storing and transporting live fish according to claim 1,
 c h a r a c t e r i z e d i n that there is applied at least one brace (9) to the fish bag (1,1').
- 5. Device for transporting and storing live fish according to claim 1
 - characterized in that around the fish bag (1) there is located a first netting (2).

Application No. <u>Unassigned</u> Attorney's Docket No. <u>032292-030</u>

ABSTRACT

A fish bag (1,1') comprising a netting with bag rings (3) and at the end a second netting (4) with purse lines (5,6) and a towing line (9) and locking rings (8) to connect several fish bags (1) into larger units.

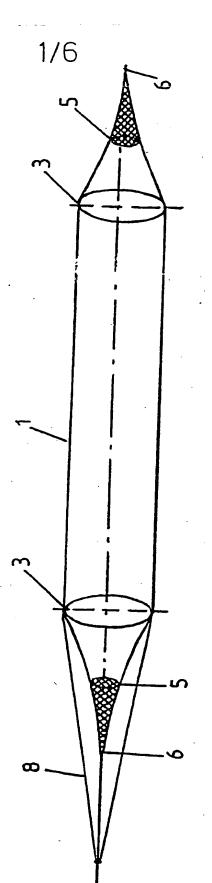
APPLN. FILING DATE: MARCH 28, 2002 TITLE: EQUIPMENT FOR STORAGE AND...

TITLE: EQUIPMENT FOR STORAGE A INVENTOR INGE HENNING JENSSEN WO 01/246 APPLICATION SERIAL NO: 032292-030

SHEET 1 of 6

PCT/NO00/00326

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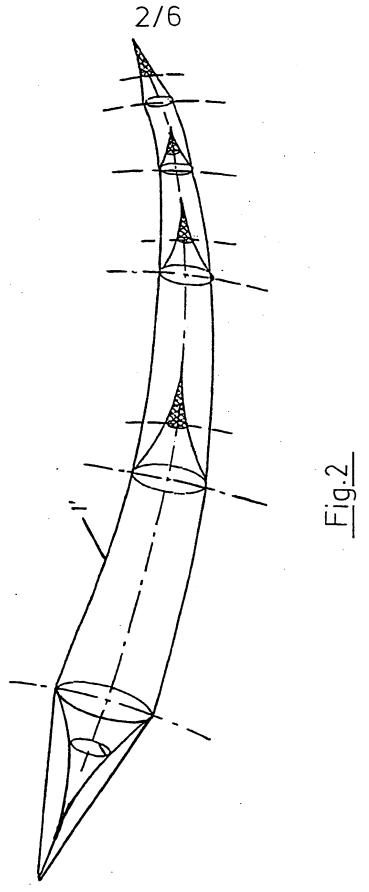
APPLN. FILING DATE: MARCH 28, 2002 TITLE: ECHIPMENT FOR STORAGE AND...

INVENTOR INGE HENNING JENSSEN

WO 01/2462: APPLICATION SERIAL NO: 032292-030

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SHEET 2 of 6 PCT/NO00/00326



SUBSTITUTE SHEET (RULE 26)

APPLN. FILING DATE: MARCH 28, 2002
TITLE: EQUIPMENT FOR STORAGE AND...
INVENTOR(S) INGE HENNING JENSSEN
WO 01/24 APPLICATION SERIAL NO: 032292-030 S

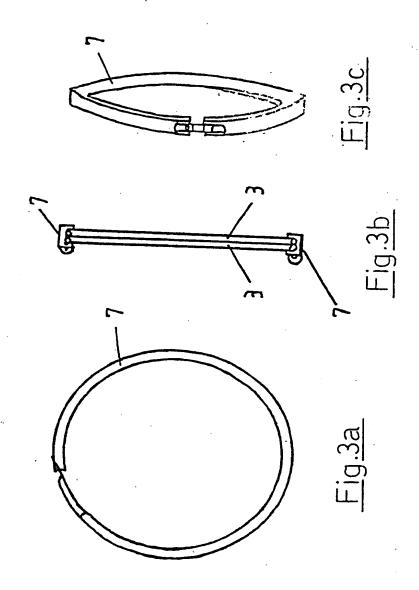
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SHEET 3 of 6

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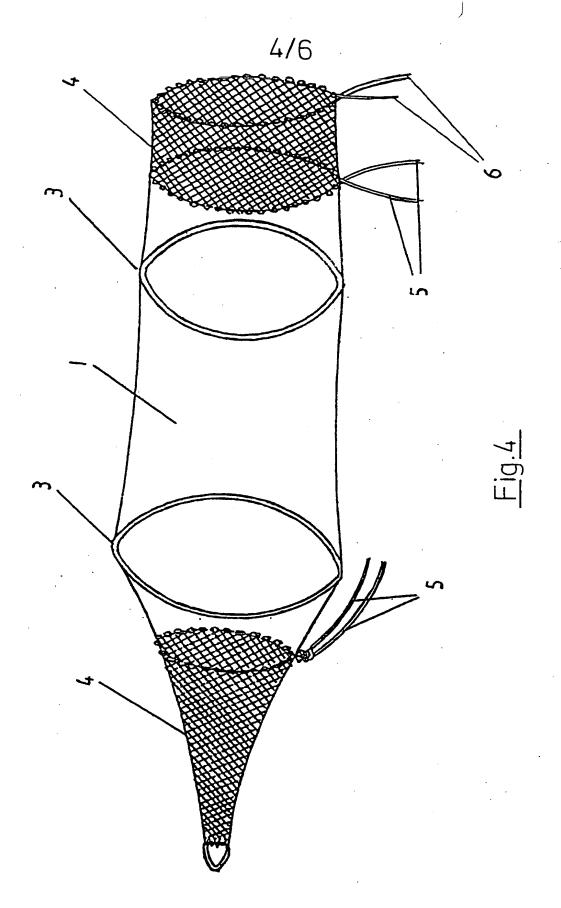


INVENTOR INGE HENNING JENSSEN
WO 01/246
APPLICATION SERIAL NO: 032292-030

SHEET 4 of 6

10/089225

PCT/NO00/00326



APPLN. FILING DATE: MARCH 28, 2002 TITLE: EMIPMENT FOR STORAGE AND...

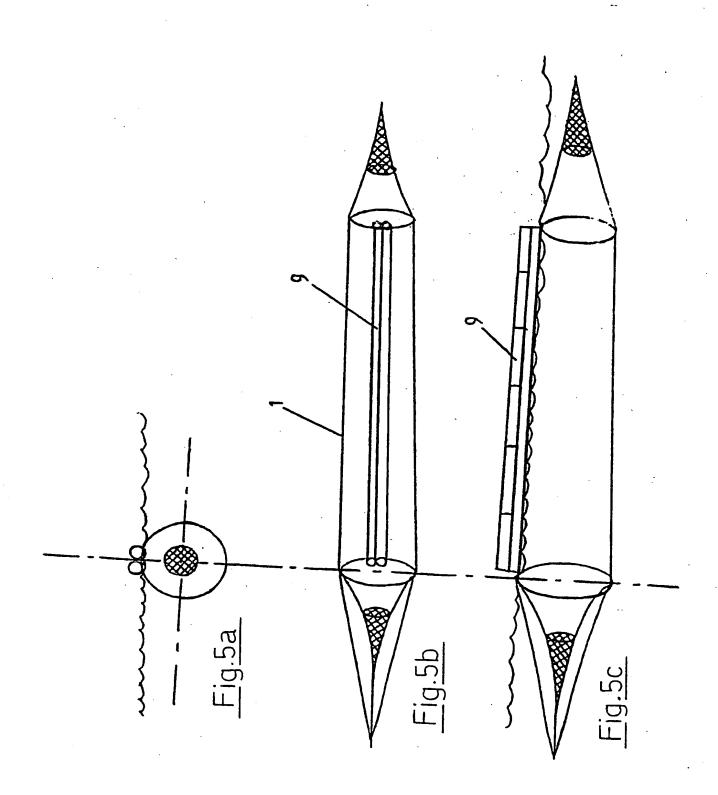
INVENTOR: INGE HENNING JENSSEN
WO 01/246; APPLICATION SERIAL NO: 032292-030

SHEET 5 of 6

PCT/NO00/00326

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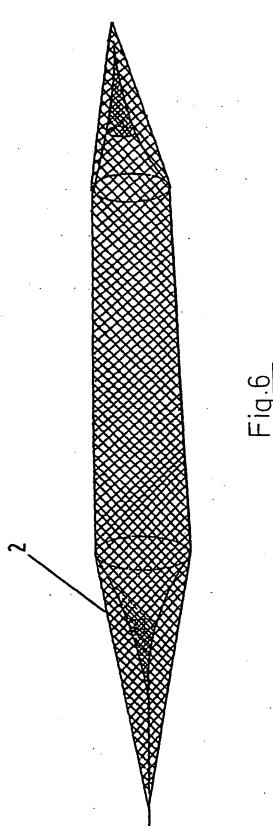
10/089225

APPLN. FILING DATE: MARCH 28, 2002
TITLE: QUIPMENT FOR STORAGE AND...
INVENTOR(S): INGE HENNING JENSSEN
WO 01/24623 APPLICATION SERIAL NO: 032292-030 S

SHEET 6 of 6

PCT/NO00/00326

6/6



INTERNATIONAL SEARCH REPORT

Form PCT/ISA/210 (second sheet) (July 1998)

International application No.

		PC17NO 0070	JU320			
A. CLAS	A. CLASSIFICATION OF SUBJECT MATTER					
IPC7: According	IPC7: A01K 63/02 According to International Patent Classification (IPC) or to both national classification and IPC					
B. FIELI	DS SEARCHED					
Minimum o	documentation searched (classification system followed l	by classification symbols)				
IPC7:						
. .	tion searched other than minimum documentation to the	he extent that such documents are included i	n the fields searched			
<u> </u>	FI,NO classes as above					
Electronic d	data base consulted during the international search (name	ne of data base and, where practicable, search	h terms used)			
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	JMENTS CONSIDERED TO BE RELEVANT	· · · · · · · · · · · · · · · · · · ·	<u> </u>			
Category*	Citation of document, with indication, where ap	opropriate, of the relevant passages	Relevant to claim No.			
Α .	GB 730652 A (ERNST KARL ROSCHER (25.05.55), page 2, column	2), 25 May 1955 54 - line 80, figure 1	1,3,5			
	·	·	·			
·	·					
	er documents are listed in the continuation of Bo	x C. X See patent family annex	•			
	categories of cited documents: nt defining the general state of the art which is not considered	"T" later document published after the inte	mational filing date or priority			
"E" earlier a	particular relevance application or patent but published on or after the international	date and not in conflict with the applie the principle or theory underlying the i	uncentioù			
"L" docume	ming date					
O docume	reason (as specified) nt referring to an oral disclosure, use, exhibition or other	"Y" document of particular relevance: the considered to involve an inventive step	when the document is			
"P" docume	P' document published prior to the international filing date but later than					
ute prior	e actual completion of the international search	document member of the same patent f				
	or the international search	Date of mailing of the international se	earch report			
9 Janua	ry 2001	17.	-01- 2001			
	mailing address of the ISA:	Authorized officer				
Swedish Patent Office Box 5055, S-102 42 STOCKHOLM Caroline Stolt/js						
	No. +46 8 666 02 86	Tulonhone No. +46 9 200 es co				

INTERNATIONAL SEARCH REPORT

Information on patent family members

Form PCT/ISA/210 (patent family annex) (July 1998)

International application No.

04/12/00 PCT/NO 00/00326 Patent document cited in search report Publication Patent family member(s) Publication date date GB 730652 25/05/55 NONE

PCT

POWER OF ATTORNEY

(for an international application filed under the Patent Cooperation Treaty)

(PCT Rule 90.4)

The undersigned applicant(s) (Names should be indicated as they appear in the request):
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N-0306 OSLO
Norway
to represent the undersigned before X all the competent International Authorities
the International Searching Authority only
the International Preliminary Examining Authority only
in connection with the international application identified below:
Title of the invention: Equipment for storage and transport of
living fish
Applicant's or agent's file reference: 142977
International application number (if already available): PCT/NO00/00326
filed with the following Office The Norwegian Patent Office as receiving Office
and to make or receive payments on behalf of the undersigned.
Signature of the applicant(s) (where there are several applicants, each of them must sign; next to each signature, indicate the name of the person signing and the capacity in which the person signs, if such capacity is not obvious from reading the request or this power):
······
Inge Henning Jenssen
Date: <u>Inge Henning Jensson</u>

REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

- For receiving Office use only -

PCT/NO 0 0 / 0 0 3 2 6 International Application No.

2000 -10- 0 4 International Filing Date



Name of receiving Office and Tell International Application"

	(if desired) (12 characters maximum)							
Box No. I TITLE OF INVENTION								
EQUIPMENT FOR STORAGE AND TRANSPORT OF LIVING FISH								
Box No. II APPLICANT								
Name and address: (Family name followed by given name; for a designation. The address must include postal code and name of cou address indicated in this Box is the applicant's State (that is, country of residence is indicated below.)	X This person is also inventor.							
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Hansjordnes gate 8, N-9009 Tromsø	Facsimile No.							
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Jurikon Teknologi AS Storgata 102, 9008 Tromsø	+ 47 77 66 25 56							
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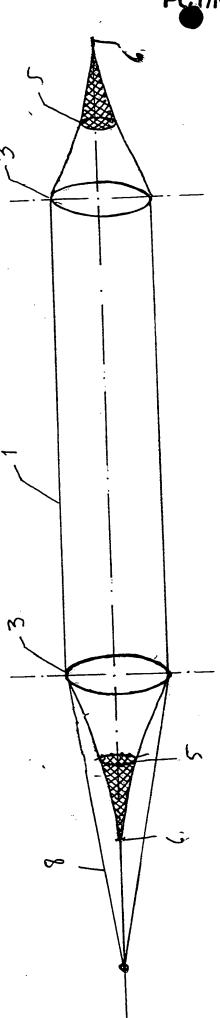
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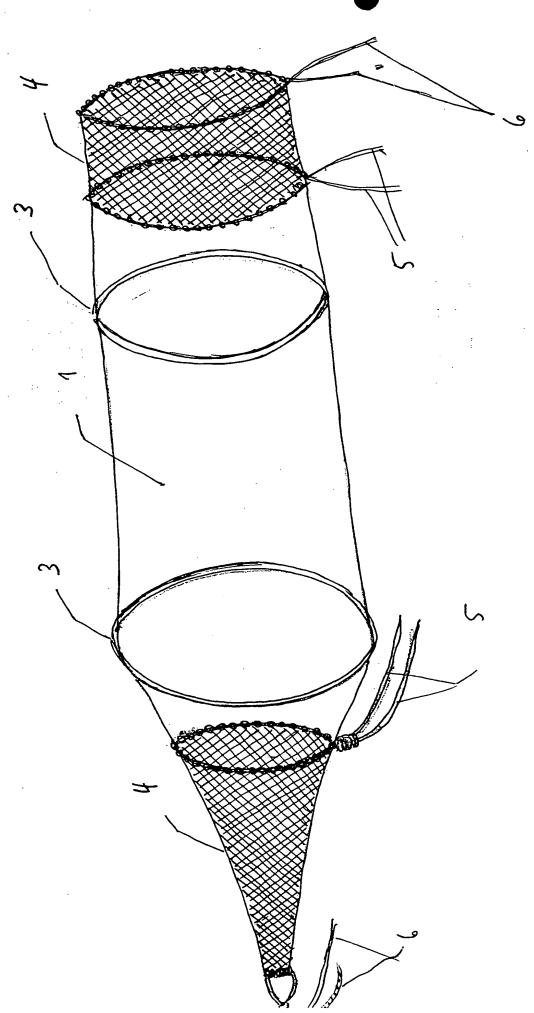
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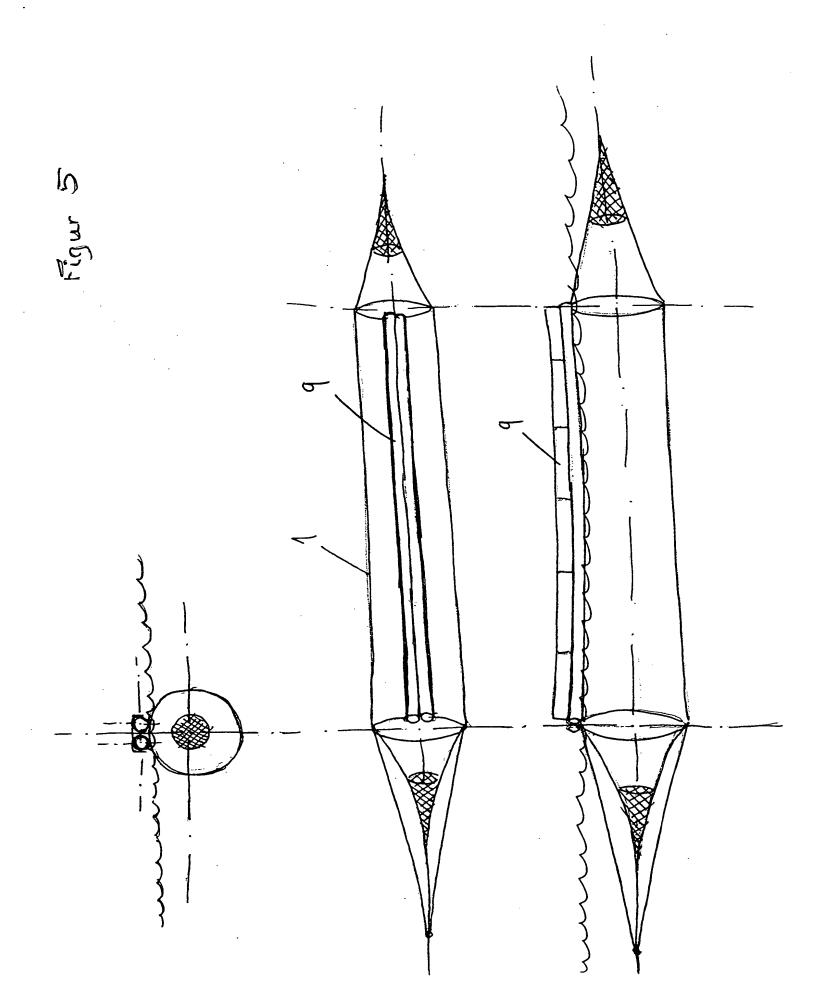
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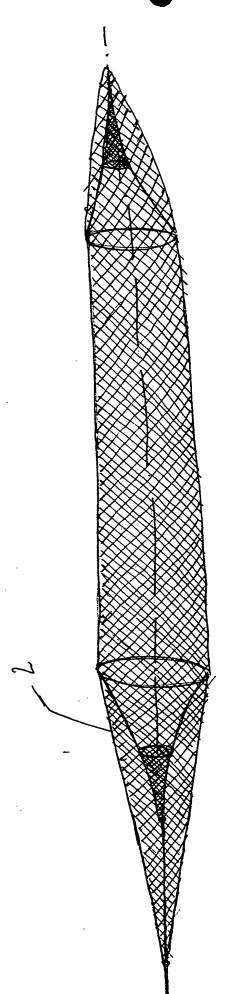
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Figur 4



Figur 6



1

Oppfinnelsen angår primært en innretning for oppbevaring og transport av levende fisk hvor innretningen er pølseformet og transporten skjer fortrinnsvis ved at denne slepes etter båt.

Høsting av havet i form av fiske er et den største og eldste næring her i landet gjennom historien I dag er fiskeeksporten dersom man ser bort fra petroleumsområdet vår største næring i kroner og det å kunne utføre sikre leveranser av produkter med høy kvalitet, er av avgjørende betydning for at det skal forbli en stor næring også i fremtiden.

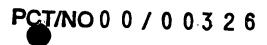
Det dumpes store mengder fisk fordi man ikke har kapasitet til å føre den på land eller den ikke er av helt riktig kvalitet.

Det er flere faktorer som er medvirkende til å bestemme kvaliteten på fisken og fiskeprodukter når de når frem til forbrukerne en eller annen plass i verden. Idet fisken dør starter en prosess i fiskekjøttet som forringer det. Kvaliteten på fiskekjøttet når det når frem til forbrukes kan økes ved at man venter lengst mulig med å ta livet av fisken slik at forringelsesprosessen er kommet kortest mulig. Den videre behandlingen av fisken i form av bearbeiding, foredling, lagring og transport, bør gjøres kortest mulig og under best mulige forhold for å opprettholde kvaliteten.

Den å forsinke tidspunktet for slakting og start av forringelsesprosessen, er en metode som har vært benytte i flere sammenhenger også noe tilbake i historien. I sesonger med for eksempel god tilgang på seil og kanskje mangel på kapasitet på mottakene i land, er det å sette fiske i steng vanlig. Det gjøres ved at fisk som er fanges levende står stengt inne i en notpose som er forankret, til den hentes og håves inn i brønnbåt eller notposen tauet til et fiskemottak. Fisk som lukkes slik i steng, blir stående trangt kanskje det er dårlige strømforhold og det stresser fisken som igjen reduserer kvaliteten og fisk dør.

Det benyttes brønnbåter for å hente fisken fra steng. Brønnbåter er utstyrt med tanker som pumpes inn sjøvann i og hvor fiske oppbevares under transport til fiskemottak. Brønnbåter er en kostbar løsning og når man i tillegg det mange tilfeller er mye fisk som dør i stengene før brønnbåter henter dem, så blir kanskje det økonomiske resultatet av fisken ikke formålstjenlig i mange tilfeller.

I norsk patent nr. 20.850 er det beskrevet en oppbevaringsenhet for levende fisk bestående av flottører i begge ender og mellom disse nettlignende bur for



oppbevaring av fisk. En slik løsning er egnet for oppbevaring av fisk, er noe mer kostbar enn nødvendig, og er ikke noen god løsning med tanke på transport. Transport av fisk i slike innretninger vil ha sin begrensning hvor hurtig den kan transporteres for at fiske skal overleve, hvilket ikke er noen økonomisk god hastighet for transporten i seg selv.

Norsk patent nr. 81.500 beskriver beholder for oppsamling av fisk fra en trål og for videre transport av oppsamlet levende fisk til mottak og kortere oppbevaring. Oppsamleren er knytte til en trålpose og ansees ikke å være noen god måte å oppbevare og frakte fisk på med tanke på å opprettholde kvalitet og unngå fiskedød.

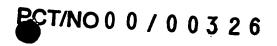
I tillegg til transport av fisk mer eller mindre lukkede hydrodynamiske innretning, transporteres fisk i slep i nettposer, merder. Slepet kan ikke komme holde større fart en 2-3 knop hvilket er svært tidkrevende. Slike løsninger er beskrevet i norsk patent nr. 24.069 og 52.761. Den førstnevnte beskriver en notpose som holdes utspilt av et flytelegeme og hele innretning trekkes av en båt. En større fart enn 2-3 knop vil være stressende for fisken og skape forhold som øker dødelighet. I nr. 52.761 beskrives en noen tilsvarende innretning, men her er det lagt vekt på at det finnes innretninger i tillegg til notposen som holder denne oppspilt for å unngå at den klemmes sammen under transport.

En beholder for transport av levende fisk hvor det også er gjennomstrømning av vann fremgår av norsk patent nr. 105.955. En gjennomstrømning som kan reduseres ved at ende delvis består av fast gitter eller at ende er trakteformet. Dette for å redusere bokseringsmotstanden og hinder død av fisk.

Hensikten med foreliggende oppfinnelse er å fremskaffe en innretning som egner seg til oppbevaring og transport av levende fisk for transporthastigheter langt over (10-12 knop) det fisken kan tåle, men uten at det forringer den miljø. Oppfinnelsen tar mål av seg til å ha en slik pris at det er konkurransemessig det som finnes av transportinnretninger for levende fisk.

Dette oppnås ved att en fiskepose anordnet i begge ender med poseringer og hvor det minste i en ende er anordnet et 1. nett og en trakt med snørpemekanisme.

Ytterligere detaljer ved oppfinnelsen vil fremgå av den etterfølgende gjennomgangen av et eksempel på utførelse av denne under henvisning til tegningene.



Figur 1 viser grunnforming av oppfinnelsen.

Figur 2 viser sammenkobling av flere enheter til større poser.

Figur 3 viser koblingsenheter for flere enheter sammen til større poser.

Figur 4 viser detaljutforming av oppfinnelsen yttervegg.

Figur 5 viser oppfinnelsen utstyrt med avstivning og forankring av

posen.

Figur 6 viser fiskeposen under transport med et ekstra ytre nett.

Oppfinnelsen består av en fiskepose 1 som er tilvirket i en sterk duk.

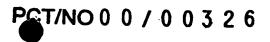
Dersom man ønsker en ekstra styrke under for eksempel transport, kan man innhylle hele fiskeposen 1 i et 1. nett 2. Se figur 6. Fiskeposen 1 er rørformet og anordnet med en posering 3 i begge ender noe innenfor enden for å holde rørformen utspilt. Det er anordnet til endene av fiskeposen 1 et rørformet 2. nett 4. I overgangen mellom fiskeposen 1 og det 2. nettet 4, finnes en 1. snurpeline 5. En 2. snurpeline 6 finnes i den andre enden av det 2. nettet 4. Ved hjelp av disse snurpelinene 5,6, kan fiskeposen 1 snøres sammen og bli lukket i enden slik at fisk ikke kommer ut, men man vil kunne bestemme og styre gjennomstrømningen av vann i fiskeposen 1. Dette fremgår av figurene 1 og 4.

Flere fiskeposer 1 kan kobles sammen til større enheter som vist i figur 2. Sammenkoblingen skjer ved at poseringer 3 fra to fiskeposer 1 legges inntil hverandre, og føyes sammen av en låsering 7. Se figur 3. I sammenkoblingen vil det således forefinnes to slike traktformede enheter, en fra hver fiskepose 1. Når fiskeposen 1, 1' skal slepes etter båt, så kan det kobles ekstra slepeliner 8 mellom båt og poseringen 3.

Under transport av fisk i fiskeposen 1, 1' er den 1. snurpelinen 5 delvis lukket og den 2. snurpelinen 6 helt lukket slik at gjennomstrømning av vann blir passe stor og behagelig for fisken.. Fiskeposen 1 kan transporteres med stor hastighet til bestemmelsesstedet uten at fisken skades eller dør.

Ved bruk av foreliggende oppfinnelse kan fisk slepes til land, lagre den levende til mottaket har kapasitet eller markedet gir bedre pris. Videre kan fisken slepes nærmest mulig markedet i levende tilstand før den slaktes.

Ifølge meldinger fra Fiskeridepartementet vil et større antall fiskemottak langs kysten bli nedlagt innen kort tid. Det betyr lengere transport for levering av fisk og større behov for transport av fisken levende for opprettholdelse av kvaliteten.



Ved oppbevaring av fiskeposen 1, 1' i sjø for levende lagring av fisken, kan det til fiskeposen 1,1' anordnes langsgående avstivere 9 i form av for eksempel rør. Se figur 5. Disse kan også fungere som vandring for personer som ser til passer fisken. Fiskeposen (1) kan påsettes strømsettere i form av motordrevne propeller for å opprette ønsket vanngjennomstrøming når fiskeposen (1) er i ro, f.eks. ved oppbevaring av fisk.

PATENTKRAV

- 1. Anordning for oppbevaring og transport av levende fisk, **karakterisert ved** en fiskepose (1) anordnet i begge ender med poseringer (3) og hvor det i endene er anordnet et 2. nett (4) og med snurpeliner (5,6).
- 2. Anordning for oppbevaring og transport av levende fisk ifølge krav 1, **karakterisert ved** at flere fiskeposer (1) er anordnet sammen ved hjelp av låseringer (7).
- 3. Anordning for oppbevaring og transport av levende fisk ifølge et av de foregående kravene, **karakterisert ved** at det i ene enden av fiskeposen (1,1') er anordnet slepeliner (8).
- 4. Anordning for oppbevaring og transport av levende fisk ifølge krav 1, karakterisert ved at det er anordnet minst en avstivere (9) til fiskeposen (1,1').
- 5. Anordning for oppbevaring og transport av levende fisk ifølge krav 1, karakterisert ved at det rundt fiskeposen (1) er anordnet et 1. nett (2).

SAMMENDRAG

En fiskepose (1,1') bestående av duk med poseringer (3) og i enden et 2. nett (4) med snurpeliner (5,6) og en slepeline (9). En eller flere avstivere (9) og låseringer (8) for å koble sammen flere fiskeposer (1) til større enheter.

Figur 1.